



SDI Review Form 1.6

Journal Name:	Asian Journal of Chemical Sciences
Manuscript Number:	Ms_AJOCS_32155
Title of the Manuscript:	Synthesis, characterization and swelling behavior of guar gum-g-poly (methyl methacrylate) superabsorbent nanocomposite
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	Ref. 5. Chauhan K, Chauhan GS and Ahn J-H. Synthesis and characterization of novel guar gum hydrogels 249 and their use as Cu²⁺ sorbents. Bioresour Technol 2009; 100: 3599–3603. -Is Cu²⁺ correct word? 6 Novel guar gum-g-poly (methyl methacrylate) superabsorbent nanocomposite.... -What kind of nanocomposite? Polymer nanocomposite or organic/inorganic nanocomposite? If the latter, how H₃BO₃ reacts with the graft copolymer? 38 reactivity and can be facilely modified by grafting -what is facilely?	Thank you for comments. Correction has been made. It is polymer nanocomposite as it is prepared by natural polymer guar gum and monomer MMA by copolymerization reaction. Boric acid is used as cross linking agent and its reaction is given in reaction mechanism. Facilely means easily. In chemistry terms, a reaction or process taking place readily.
Minor REVISION comments		
Optional/General comments	83 porous and broad network structure... -SEM picture needs scaling bar, magnification is needed. It is difficult to see the porosity in this picture. Also, SEM picture of H₃BO₃ nanocomposite is needed. 116 peaks at scattering angle (2theta) at 30° and 50.9°. This..... -What do these signals confirm? The description about the signals is very weak. 124 Figure 6 shows the thermogram of GG-g-PMMA composite.... -TGA analysis needs Guar gum curve and PMMA curve. The interpretation is not enough to describe the thermal property. -The polymerization and crosslinking reaction scheme are needed. I saw an article in internet that the authors did not cited. P. J. Subrahmanyam J. Chem. Pharm. Res., 2012, 4(2):1052-1060. Design and development of guar gum and borax crosslinked guar gum matrix tablets of theophylline for colon specific drug. I suggest The Authors should do literature search in detail, because there should be myriad of this type of graft copolymer in the literature.	Scaling bar is already given in SEM images. I have included SEM images of composite at higher magnification. It is not H₃BO₃ nanocomposite so SEM image of boric acid composite is not needed. The peaks at higher theta shows the crystalline nature of prepared nanocomposite. TGA curve of guar gum and PMMA has been included. Reaction Scheme of polymerization and cross linking has been included. This article is basically related to graft copolymer prepared from guar gum and borax by direct cross linking. I have prepared graft copolymer of GG and MMA using free radical graft copolymerization. It is entirely different from my research work. Therefore, there is no need to cite this article.